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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/546,981	04/11/2000	Anthony Matteo Gallo	RAL9-00-0035	4599

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EXAMINER

PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 09/22/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/546,981

Applicant(s)

GALLO ET AL.

Examiner

B. Prieto

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to Amendment filed 07/09/03; claims 1-16 remain pending and are hereby set forth for examination.
2. In regards to applicant's amendment to the specification, applicant has deleted "indicated that the originating network segment and the destination segment are the same" to be replaced by "according to a set of rules". Applicant has indicated that support for this amendment is found on page 6, lines 3-7, which reads, the hardware in the NP includes a plurality of forwarding processor which can perform fast database look-ups, and a specialized processor known as a Guide Tree Handler which manages the MAC address database 214.

In this case, it is found that noted passage does not support the specification as amended. According to the MPEP, no new matter may be introduced into an application after its filing date (see MPEP §601.01 and 2406.01). Correction is required.

Claim Rejections - 35 USC § 103

3. Quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action may be found in previous office action.
4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over NAGAMI et. al. (Nagami) U.S. Patent No. 6,343,322.

Regarding claim 1, Nagami teaches features of the invention substantially the same as claimed, teaching a network router 601 (col 7/lines 1-10, 31-40 of Fig. 4) (switch) comprising a control unit 207 (control point) and a plurality of network processing units 202-206 (network processors) (col 8/lines 54-62), a method comprising;

- (a) receiving data (data frames) from a network (Fig. 7, step S1, col 9/lines 27-29);
- (b) performing transferring functions (col 1/lines 53-col 2/lines 5, col 9/lines 8-24, bridging functions, col 12/lines 64-67) (logical bridging, filtering, col 2/lines 53-56) of data frames received (Fig. 7, step S2);

wherein the data frames received are determined to be processed (i.e. destined) by the network layer or an equivalent processor (control point) (Fig. 4, 204, Fig. 7, S4) in a processing unit (Fig. 4, 204) (network processor) directly connected to said control point (Fig. 4, 207).

although the prior art of record teaches performing transfer (e.g. bridging) functions or operations on data frames received destined for a processor operating, manage, direct, or manipulate, i.e. "control" received data frames, this processor(s) is not called "control point";

It would have been obvious to one ordinary skilled in the art at the time the invention was made to implement claimed invention with prior art teachings having element performing the same functions as claimed. Therefore, the nomenclature noted differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Regarding claim 2 (c) determining whether said data frame is destined for said control point (Fig. 7, S4); and

(d) sending said data frame to said network processor directly connected to said control point when said step (c) indicates that said data frame is destined for said control point (Fig. 7, S4-S5).

Regarding claim 3,

(e) searching (looking up) a destination address in said frame in data storage, (e.g. table t1) (media access control (MAC) address database) (col 1/lines 53-64, Fig. 7, S2);

(f) sending said data frame to a unit having routing functions (logical router) (col 1/lines 38-46, col 8/lines 19-23, col 9/lines 33-37) when said look-up determines that said data frame requires processing by a logical router (Fig. 7, S2-S5, col 14/lines 50-col 15/line 4);

(g) looking up a destination address in a routing table (e.g. table t3) in said logical router (Fig. 7, S8); and

(h) sending said frame to said network processor directly to connected to said control point when said look-up determines that said frame is destined for said control point (Fig. 7, S4-S5, col 14/lines 37-col 15/line 3).

Regarding claim 4, modifying the header (setting a bit) in a portion (frame header) appended to said frame to indicate that said frame is destined for said control point (Fig. 7, S3, col 14/line 37-col 15/line 3).

Regarding claim 5, modifying, or adding or updating (i.e. learning) learning a source MAC address in said frame in a MAC address database (col 15/lines 24-30, col 9/lines 65-col 10/line 7); and

sending said frame to said control point (i.e. sending said data frame to a unit having routing functions (logical router), col 1/lines 38-46, col 8/lines 19-23, col 9/lines 33-37, when said look-up determines that said data frame requires processing by a logical router Fig. 7, S2-S5, col 14/lines 50-col 15/line 4).

Regarding claim 6, looking up a destination address in a frame originating from said control point in a MAC address database; and forwarding said frame to a target network processor and port found in said look-up (col 14/line 37-col 15/line 3, table correlate destination and port, col 7/lines 9/lines 10-23 & 33-37, tables, col 15/lines 20-52).

Regarding claim 7, this apparatus claim comprises elements discussed on claim 1, same rationale of rejection is applicable. Further, wherein said plurality of network processors programmed with logical bridging and logical routing functions, wherein the network processor performs bridging functions and the control point performs the routing functions (combined routing and bridging functions, col 1/lines 64-col 2/line 5, combined routing L2 (bridging) and L3 (routing) functions (Fig. 4, data link layer functions of units 202-206, & routing functions of unit 207 network layer functions (col 10/lines 61-col 11/line 22).

Regarding claim 8, determination and sending steps of claim 2 are performed by the units performing said logical bridging and logical routing functions (Fig. 7, S4-S5, units 202-207, col 11/lines 34-col 15/line 3).

Regarding claim 9, comprising limitations discussed on claim 1 and claim 5, same rationale of rejection is applicable.

Regarding claim 10, same rationale from claims 1-5 regarding a frame send from said network processor to the control point is applicable to frames received from the control point send to the network processor (Fig. 7, S7).

Regarding claim 11, this claim comprises a computer-usable medium storing computer executable instructions, said instructions when executed by processors in the apparatus of claim 1, implementing a

method described in claim 1, same rationale of rejection is applicable to the software implementation claims

Regarding claims 12-16, this claim comprises the computer-usable medium corresponding to the steps performed in claims 2-6, same rationale of rejection is applicable to the software implementation claims.

Response to arguments

5. Applicant argues prior art Nagami does not teach claim limitation as recited specifically, performing logical bridging in a single processor directly connected to the control point, because according to applicant, in the Nagami reference units 202-204 are used to perform logical bridging pointing to col 9/line 1 to column 10/line 7 of the reference, wherein only the network layer unit 204 performs logical bridging functions and is directly connected to said control point, according to applicant, thereby does not teach where a single network processor directly connected to the control point.

In response to the applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a single network processor directly connected to said control point") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

According to applicant's specification the network processor does not contain a "single processor", but disclosed that the hardware in the NP includes a plurality of forwarding processors which can perform fast database look-ups, and a specialized processor known as a Guide Tree Handler which manages the MAC address database 214 (see page 6, lines 3-7). Arguments that the prior art does not teach a single processor are not persuasive.

6. Applicant argues that the goal of the claim invention is to off-load processing tasks such as OSPF from the control point and Nagami discloses a network layer control unit 204 which managed L3 routing table using existing routing protocols such as OSPF according to applicant, therefore the Nagami reference teaches away from the claimed invention.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the goal of off-loading processing task such as from the control point") are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Prosecution of this application is closed by means of this final office action § 1.113, applicant may request continued examination of the application by filing a Request for Continued Examination of under 37 CFR § 1.114 and providing the corresponding fee set forth in § 1.17(e) for the submission of, but not limited to, new arguments, an information disclosure statement, an amendment to the written description, claims, drawings, or new evidence in support of patentability. Or applicant whose claims have been twice rejected, may appeal from the decision of the administrative patent judge to the Board of Patent Appeals and Interferences under 35 U.S.C. §134.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Mark R. Powell can be reached on (703) 305-9703. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6606. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this final action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231


Or faxed to the Central Fax Office:


(703) 872-9306, for Official communications and entry

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington VA, Sixth Floor (Receptionist).


B. Prieto
TC 2100
Patent Examiner
September 8, 2003

MARC D. THOMPSON

PRIMARY EXAMINER